

SEQUENCE LISTING

<110> CHRISTENSEN, GEIR
ANDERSSON, KRISTIN BREVIK

<120> NON-HUMAN MAMMAL COMPRISING A MODIFIED SERCA2 GENE AND
METHODS, CELLS, GENES, AND VECTORS THEREOF

<130> 3657-1037

<140> 10/585,077
<141> 2006-06-29

<150> PCT/NO04/000397
<151> 2004-12-22

<150> 60/533,740
<151> 2003-12-30

<160> 32

<170> PatentIn Ver. 3.3

<210> 1
<211> 801
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide construct

<400> 1
cacggggctg agcttggagc aggtcaagaa gctcaaggag agatggggct ccaacggtag 60
gtgcggggcg ccggggctgc agcggcgcgg cgccggcccg agcgccaagg aagatggctg 120
accggcgtcc acctcgtggg gcttggctcg ggcggcgcc cgacggctgc gagaggccgg 180
cggtccacgc gcgggtctgg gccatcgccg accttagggg tctcgaatca agcttatcga 240
taccgtcgat cggacacctgaa gggggggccc ggtacccggg gatcaattcg agctcgcccg 300
gggatcgatc cggaaaccttt aatataactt cgtataatgt atgctatacg aagttattag 360
gtccctcgac ctgcagcccc agctccgggg atctcgagcc ggtgaccttc cccggccggcg 420
ctcagcgagt cggattgggg gggggggaga gggagtggga aggaggagg aggttctgc 480
ggctgggctg agtccccccgc ggatttatga ggcgtcgatg ttgttgagaa accctcgac 540
cgtttcttgt gctccccaaa gttgcacatc tggcagaagt gatgaccagg ctgaaatgac 600
tgcatggtcc tggaggccgg agagggctta cggcagttc cgaggccact gattaccagg 660
gctgaataat tttctcgggg tatcaaagtg gagacagatt gttgtacgtt catacaccta 720
tatccgcat tcagacaacg atggtggtga atttagcagt ttttaataaa agcgctaata 780
caatatcttc attttcttt c 801

<210> 2
<211> 803
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
nucleotide construct

<400> 2
 ccaattttta ttcttagaac attgttattct tatactgtga taggaagtga aaaatcatac 60
 agtacttgc tttaggttca caaaaactgat aactgtatgg tttcaattat gtattcacac 120
 gtttaagtct gaccagggg gatccggAAC ccttaatata acttcgtata atgtatgcta 180
 tacgaagtttta tttaggtccct cgacctgcag cccaaagctga tcctctagtc gagccccAGC 240
 tggttcttgc cgccctcagaa gccatagAGC ccacccgcAC cccagcatgc ctgctattgt 300
 cttcccaatc ctcccccttg ctgtcctGCC ccacccCAcc ccccagaATA gaatgacacc 360
 tactcagaca atgcgatgca atttcctcat tttatttagga aaggacAGT ggagtggcac 420
 cttccagggt caaggaaggc acggggggggg ggcaaaacaac agatggctgg caactagaag 480
 gcacagtgcgA ggctgatcag cgagctctag ctagagaattt gatcccctca gaagaactcg 540
 tcaagaaggc gatagaaggc gatgcgtgc gaatcgggg cggcgatccg taaagcacga 600
 ggaaggcgca gcccattcgc cgccaaAGCT tttcagcaat atcacgggtA gccaacgcta 660
 tgtctgataa gcggtccggc cacacccAAc cggccacaAG tcatgaaATC caaaaaAGCG 720
 ggccattttt ccacatgat tttcggcaag caaggcTTT ccattgggtc accgacagac 780
 attccgtcg gcattgcGCC cct 803

<210> 3
 <211> 860
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 nucleotide construct

<400> 3
 gttttcatac caccgcgggt cccgggcgtt atttcacctt gtcagcggtg ttgtgtgggt 60
 taaatgttcg cgattgttc gaaagccccca gcacccgcca gtaagtcatc ggctcgggtta 120
 cgtagacat atcgtcgcgc gaacccaggc ccaccagcaa gttgcgtgg ggtggttttc 180
 cccatccgtg gggacgtcta tataaaACGCA agtagcgtgg gcattttctg ctccgggcgg 240
 acttccgtgg ctcttgcgtg ccggcgaggc cgcaacgcgg tacgtcgggt gctatggccg 300
 cgagaacgcg caggcgtggc gaacgcagac ggcgtgttat ggccgggtta cgaagccata 360
 cgcgcTTcta caaggcgctg gccgaagagg tgccggagtt tcacgcacc aagatctgcg 420
 gcacgcgttt gacgcgttta agcgggtcgc tgccgggtcg ctccgggttc gaggccacac 480
 gcgtcacctt aatatgcgaa gtggaccccg gaccgcgcgg ccccgactgc atctgcgtgt 540
 tcgaattcgc caatgacaag acgctggcg ggggttgc gacattgggt gaaaacattc 600
 caggcctggg tggagaggct tttgcTTCC tcttgcAAAA ccacactgct cgacattggg 660
 tggaaacattt ccaggcctgg gtggagaggc ttttgcTTTC ctcttgcAAAA ccacactgct 720
 cgatccggaa cccttaatata aacttcgtat aatgtatgct atacgaagtt attaggtccc 780
 tcgacctgca gccaaggctg atccctctaga gtcgacccgt atctgtggtc atggcctcta 840
 tggaaacattt agcttagagg 860

<210> 4
 <211> 34
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 oligonucleotide

<400> 4
 ataacttcgt ataatgtatg ctatacgaag ttat

<210> 5
<211> 19
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 5
ccaaggaaga tggctgacc

19

<210> 6
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 6
catcgacgcc tcataaaatcc

20

<210> 7
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 7
tcttcataaac acacgccaat tt

22

<210> 8
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic primer

<400> 8
ccctttgctg ccaatttaact att

23

<210> 9
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 9
acctctaggg gtctcgaatc a

21

<210> 10
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 10
aagttgaata accggaaaatg gttt

24

<210> 11
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 11
tgttataaggc aatccccaga aatg

24

<210> 12
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 12
aggctccctcg aactctccag

20

<210> 13
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 13
gtaagagagc ttccctcctc ctt

23

<210> 14
<211> 994
<212> PRT
<213> Mus musculus

<400> 14
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Gly Val Ser Glu Thr Thr Gly Leu Thr Pro Asp Gln Val Lys Arg His
20 25 30
Leu Glu Lys Tyr Gly Pro Asn Glu Leu Pro Ala Glu Glu Gly Lys Ser
35 40 45
Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
50 55 60
Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
65 70 75 80
Gly Glu Glu Thr Val Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
85 90 95
Ile Leu Ile Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
100 105 110
Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
115 120 125
Val Tyr Arg Ala Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Arg Asp
130 135 140
Ile Val Pro Gly Asp Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
145 150 155 160
Ala Asp Ile Arg Ile Leu Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
165 170 175
Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
180 185 190
Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
195 200 205
Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Val Gly Ile Val Ala
210 215 220
Thr Thr Gly Val Ser Thr Glu Ile Gly Lys Ile Arg Asp Gln Met Ala
225 230 235 240
Ala Thr Glu Gln Asp Lys Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
245 250 255
Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Val Ala Val Trp
260 265 270

Leu Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Phe Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Lys Met Phe Ile
 355 360 365

Ile Asp Lys Val Asp Gly Asp Val Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Glu Gly Glu Val Leu Lys Asn Asp Lys
 385 390 395 400

Pro Val Arg Ala Gly Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ser Leu Asp Phe Asn Glu Thr Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Thr Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asn Thr Glu Val Arg Ser Leu Ser Lys
 450 455 460

Val Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Arg Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Ser Pro Ala Lys Ser Ser Arg Ala Ala Val Gly Asn Lys Met
 500 505 510

Phe Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Asn Tyr Val
 515 520 525

Arg Val Gly Thr Thr Arg Val Pro Leu Thr Gly Pro Val Lys Glu Lys
 530 535 540

Ile Met Ser Val Ile Lys Glu Trp Gly Thr Gly Arg Asp Thr Leu Arg
 545 550 555 560

Cys Leu Ala Leu Ala Thr Arg Asp Thr Pro Pro Lys Arg Glu Glu Met
 565 570 575

Val Leu Asp Asp Ser Ala Lys Phe Met Glu Tyr Glu Met Asp Leu Thr
 580 585 590
 Phe Val Gly Val Val Gly Met Leu Asp Pro Pro Arg Lys Glu Val Thr
 595 600 605
 Gly Ser Ile Gln Leu Cys Arg Asp Ala Gly Ile Arg Val Ile Met Ile
 610 615 620
 Thr Gly Asp Asn Lys Gly Thr Ala Ile Ala Ile Cys Arg Arg Ile Gly
 625 630 635 640
 Ile Phe Ser Glu Asn Glu Glu Val Thr Asp Arg Ala Tyr Thr Gly Arg
 645 650 655
 Glu Phe Asp Asp Leu Pro Leu Ala Glu Gln Arg Glu Ala Cys Arg Arg
 660 665 670
 Ala Cys Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val
 675 680 685
 Glu Tyr Leu Gln Ser Tyr Asp Glu Ile Thr Ala Met Thr Gly Asp Gly
 690 695 700
 Val Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met
 705 710 715 720
 Gly Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala
 725 730 735
 Asp Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala
 740 745 750
 Ile Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn
 755 760 765
 Val Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Leu Pro
 770 775 780
 Glu Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp
 785 790 795 800
 Gly Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile
 805 810 815
 Met Asp Arg Pro Pro Arg Ser Pro Lys Glu Pro Leu Ile Ser Gly Trp
 820 825 830
 Leu Phe Phe Arg Tyr Met Ala Ile Gly Gly Tyr Val Gly Ala Ala Thr
 835 840 845
 Val Gly Ala Ala Ala Trp Trp Phe Leu Tyr Ala Glu Asp Gly Pro His
 850 855 860
 Val Ser Tyr His Gln Leu Thr His Phe Met Gln Cys Thr Glu His Asn
 865 870 875 880

Pro Glu Phe Asp Gly Leu Asp Cys Glu Val Phe Glu Ala Pro Glu Pro
 885 890 895
 Met Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala
 900 905 910
 Leu Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp
 915 920 925
 Val Asn Ile Trp Leu Leu Gly Ser Ile Cys Leu Ser Met Ser Leu His
 930 935 940
 Phe Leu Ile Leu Tyr Val Asp Pro Leu Pro Met Ile Phe Lys Leu Arg
 945 950 955 960
 Ala Leu Asp Phe Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro
 965 970 975
 Val Ile Gly Leu Asp Glu Leu Leu Lys Phe Ile Ala Arg Asn Tyr Leu
 980 985 990
 Glu Gly

<210> 15
 <211> 998
 <212> PRT
 <213> Mus musculus

<400> 15
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Gln Pro Ala Ile Leu Glu
 995

<210> 16
 <211> 1044
 <212> PRT
 <213> Mus musculus

<400> 16
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Léu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Gln Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Ser Cys Ser
 995 1000 1005
 Leu Ser Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile
 1010 1015 1020
 Met Pro Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp
 1025 1030 1035 1040
 Met Phe Trp Ser

<210> 17
 <211> 999
 <212> PRT
 <213> Mus musculus

<400> 17
 Met Glu Glu Ala His Leu Leu Ser Ala Ala Asp Val Leu Arg Arg Phe
 1 5 10 15
 Ser Val Thr Ala Glu Gly Gly Léu Ser Leu Glu Gln Val Thr Asp Ala
 20 25 30
 Arg Glu Arg Tyr Gly Pro Asn Glu Leu Pro Thr Glu Glu Gly Lys Ser
 35 40 45
 Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Leu Val Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Thr Ala Phe Val Glu Pro Leu Val Ile Met Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Ser Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Ile Arg Ser Asp Arg Lys Gly Val Gln Arg Ile Arg Ala Arg Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Leu Arg Leu Ile Glu Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Thr Lys His Thr Asp
 180 185 190

Ala Ile Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ser Gly Lys Ala Leu Gly Val Ala Val
 210 215 220

Ala Thr Gly Leu Gln Thr Glu Leu Gly Lys Ile Arg Ser Gln Met Ala
 225 230 235 240

Ala Val Glu Pro Glu Arg Thr Pro Leu Gln Arg Lys Leu Asp Glu Phe
 245 250 255

Gly Arg Gln Leu Ser His Ala Ile Ser Val Ile Cys Val Ala Val Trp
 260 265 270

Val Ile Asn Ile Gly His Phe Ala Asp Pro Ala His Gly Gly Ser Trp
 275 280 285

Leu Arg Gly Ala Val Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Arg Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Val
 355 360 365

Val Ala Glu Ala Glu Ala Gly Thr Cys Arg Leu His Glu Phe Thr Ile
 370 375 380

Ser Gly Thr Thr Tyr Thr Pro Glu Gly Glu Val Arg Gln Gly Glu Gln
 385 390 395 400

Pro Val Arg Cys Gly Gln Phe Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Asp Leu Lys Gly Leu Ser Arg
 450 455 460

Val Glu Arg Ala Gly Ala Cys Asn Ser Val Ile Lys Gln Leu Met Arg
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Thr Arg Ala Asp Pro Lys Val Gln Ser Ser Lys Met
 500 505 510

Phe Val Lys Gly Ala Pro Glu Ser Val Ile Glu Arg Cys Ser Ser Val
 515 520 525

Arg Val Gly Ser Arg Thr Ala Pro Leu Ser Thr Thr Ser Arg Glu His
 530 535 540

Ile Leu Ala Lys Ile Arg Asp Trp Gly Ser Gly Ser Asp Thr Leu Arg
 545 550 555 560

Cys Leu Ala Leu Ala Thr Arg Asp Thr Pro Pro Arg Lys Glu Asp Met
 565 570 575

His Leu Asp Asp Cys Ser Arg Phe Val Gln Tyr Glu Thr Asp Leu Thr
 580 585 590

Phe Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Pro Glu Val Ala
 595 600 605

Ala Cys Val Thr Arg Cys Ser Arg Ala Gly Ile Arg Val Val Met Ile
 610 615 620

Thr Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Leu Gly
 625 630 635 640

Ile Phe Gly Asp Thr Glu Asp Val Leu Gly Lys Ala Tyr Thr Gly Arg
 645 650 655

Glu Phe Asp Asp Leu Ser Pro Glu Gln Gln Arg Gln Ala Cys Arg Thr
 660 665 670

Ala Arg Cys Phe Ala Arg Val Glu Pro Ala His Lys Ser Arg Ile Val
 675 680 685

Glu Asn Leu Gln Ser Phe Asn Glu Ile Thr Ala Met Thr Gly Asp Gly
 690 695 700

Val Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met
 705 710 715 720

Gly Ser Gly Thr Ala Val Ala Lys Ser Ala Ala Glu Met Val Leu Ser
 725 730 735

Asp Asp Asn Phe Ala Ser Ile Val Ala Ala Val Glu Glu Gly Arg Ala
 740 745 750

Ile Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn
 755 760 765

Val Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ile Leu Gly Leu Pro
 770 775 780

Glu Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp
 785 790 795 800

Gly Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile
 805 810 815

Met Glu Lys Pro Pro Arg Asn Pro Arg Glu Ala Leu Ile Ser Gly Trp
 820 825 830

Leu Phe Phe Arg Tyr Leu Ala Ile Gly Val Tyr Val Gly Leu Ala Thr
 835 840 845

Val Ala Ala Ala Thr Trp Trp Phe Ile Ala Asp Ala Glu Gly Pro Gln
 850 855 860

Val Thr Phe Tyr Gln Leu Arg Asn Phe Leu Lys Cys Ser Glu Asp Asn
 865 870 875 880

Pro Leu Phe Ala Gly Ile Asp Cys Lys Val Phe Glu Ser Arg Phe Pro
 885 890 895

Thr Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala
 900 905 910

Leu Asn Ser Val Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp
 915 920 925

Leu Asn Pro Trp Leu Leu Gly Ala Val Val Met Ser Met Ala Leu His
 930 935 940

Phe Leu Ile Leu Leu Val Pro Pro Leu Pro Leu Ile Phe Gln Val Thr
 945 950 955 960

Pro Leu Ser Gly Arg Gln Trp Gly Val Val Leu Gln Met Ser Leu Pro
 965 970 975

Val Ile Leu Met Asp Glu Ala Leu Lys Tyr Leu Ser Arg Asn His Met
 980 985 990

Asp Glu Lys Lys Asp Leu Lys
 995

<210> 18
 <211> 1038
 <212> PRT
 <213> Mus musculus

<400> 18
 Met Glu Glu Ala His Leu Leu Ser Ala Ala Asp Val Leu Arg Arg Phe
 1 5 10 15

Ser Val Thr Ala Glu Gly Gly Leu Ser Leu Glu Gln Val Thr Asp Ala ...
 20 25 30
 Arg Glu Arg Tyr Gly Pro Asn Glu Leu Pro Thr Glu Glu Gly Lys Ser
 35 40 45
 Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Leu Val Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Thr Ala Phe Val Glu Pro Leu Val Ile Met Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Ser Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Ile Arg Ser Asp Arg Lys Gly Val Gln Arg Ile Arg Ala Arg Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Leu Arg Leu Ile Glu Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Thr Lys His Thr Asp
 180 185 190
 Ala Ile Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ser Gly Lys Ala Leu Gly Val Ala Val
 210 215 220
 Ala Thr Gly Leu Gln Thr Glu Leu Gly Lys Ile Arg Ser Gln Met Ala
 225 230 235 240
 Ala Val Glu Pro Glu Arg Thr Pro Leu Gln Arg Lys Leu Asp Glu Phe
 245 250 255
 Gly Arg Gln Leu Ser His Ala Ile Ser Val Ile Cys Val Ala Val Trp
 260 265 270
 Val Ile Asn Ile Gly His Phe Ala Asp Pro Ala His Gly Gly Ser Trp
 275 280 285
 Leu Arg Gly Ala Val Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Arg Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Val
 355 360 365

Val Ala Glu Ala Glu Ala Gly Thr Cys Arg Leu His Glu Phe Thr Ile
 370 375 380

Ser Gly Thr Thr Tyr Thr Pro Glu Gly Glu Val Arg Gln Gly Glu Gln
 385 390 395 400

Pro Val Arg Cys Gly Gln Phe Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Asp Leu Lys Gly Leu Ser Arg
 450 455 460

Val Glu Arg Ala Gly Ala Cys Asn Ser Val Ile Lys Gln Leu Met Arg
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Thr Arg Ala Asp Pro Lys Val Gln Ser Ser Lys Met
 500 505 510

Phe Val Lys Gly Ala Pro Glu Ser Val Ile Glu Arg Cys Ser Ser Val
 515 520 525

Arg Val Gly Ser Arg Thr Ala Pro Leu Ser Thr Thr Ser Arg Glu His
 530 535 540

Ile Leu Ala Lys Ile Arg Asp Trp Gly Ser Gly Ser Asp Thr Leu Arg
 545 550 555 560

Cys Leu Ala Leu Ala Thr Arg Asp Thr Pro Pro Arg Lys Glu Asp Met
 565 570 575

His Leu Asp Asp Cys Ser Arg Phe Val Gln Tyr Glu Thr Asp Leu Thr
 580 585 590

Phe Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Pro Glu Val Ala
 595 600 605

Ala Cys Val Thr Arg Cys Ser Arg Ala Gly Ile Arg Val Val Met Ile
 610 615 620

Thr Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Leu Gly
 625 630 635 640

Ile Phe Gly Asp Thr Glu Asp Val Leu Gly Lys Ala Tyr Thr Gly Arg
 645 650 655

Glu Phe Asp Asp Leu Ser Pro Glu Gln Gln Arg Gln Ala Cys Arg Thr
 660 665 670

Ala Arg Cys Phe Ala Arg Val Glu Pro Ala His Lys Ser Arg Ile Val
 675 680 685

Glu Asn Leu Gln Ser Phe Asn Glu Ile Thr Ala Met Thr Gly Asp Gly
 690 695 700

Val Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met
 705 710 715 720

Gly Ser Gly Thr Ala Val Ala Lys Ser Ala Ala Glu Met Val Leu Ser
 725 730 735

Asp Asp Asn Phe Ala Ser Ile Val Ala Ala Val Glu Glu Gly Arg Ala
 740 745 750

Ile Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn
 755 760 765

Val Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ile Leu Gly Leu Pro
 770 775 780

Glu Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp
 785 790 795 800

Gly Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile
 805 810 815

Met Glu Lys Pro Pro Arg Asn Pro Arg Glu Ala Leu Ile Ser Gly Trp
 820 825 830

Leu Phe Phe Arg Tyr Leu Ala Ile Gly Val Tyr Val Gly Leu Ala Thr
 835 840 845

Val Ala Ala Ala Thr Trp Trp Phe Ile Ala Asp Ala Glu Gly Pro Gln
 850 855 860

Val Thr Phe Tyr Gln Leu Arg Asn Phe Leu Lys Cys Ser Glu Asp Asn
 865 870 875 880

Pro Leu Phe Ala Gly Ile Asp Cys Lys Val Phe Glu Ser Arg Phe Pro
 885 890 895

Thr Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala
 900 905 910

Leu Asn Ser Val Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp
 915 920 925

Leu Asn Pro Trp Leu Leu Gly Ala Val Val Met Ser Met Ala Leu His
 930 935 940
 Phe Leu Ile Leu Leu Val Pro Pro Leu Pro Leu Ile Phe Gln Val Thr
 945 950 955 960
 Pro Leu Ser Gly Arg Gln Trp Gly Val Val Leu Gln Met Ser Leu Pro
 965 970 975
 Val Ile Leu Met Asp Glu Ala Leu Lys Tyr Leu Ser Arg Asn His Met
 980 985 990
 Asp Glu Val Leu Gly Thr Phe Met Gln Ala Arg Ser Arg Gln Leu Pro
 995 1000 1005
 Thr Thr Ser Arg Thr Pro Tyr His Thr Gly Lys Lys Gly Pro Glu Val
 1010 1015 1020
 Asn Pro Gly Ser Arg Gly Glu Ser Pro Val Trp Pro Ser Asp
 1025 1030 1035

<210> 19
 <211> 1026
 <212>. PRT
 <213> Mus musculus

<400> 19
 Met Glu Glu Ala His Leu Leu Ser Ala Ala Asp Val Leu Arg Arg Phe
 1 5 10 15
 Ser Val Thr Ala Glu Gly Leu Ser Leu Glu Gln Val Thr Asp Ala
 20 25 30
 Arg Glu Arg Tyr Gly Pro Asn Glu Leu Pro Thr Glu Glu Gly Lys Ser
 35 40 45
 Leu Trp Glu Leu Val Val Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Leu Val Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Thr Ala Phe Val Glu Pro Leu Val Ile Met Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Ser Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Ile Arg Ser Asp Arg Lys Gly Val Gln Arg Ile Arg Ala Arg Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Val Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Leu Arg Leu Ile Glu Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Thr Lys His Thr Asp
 180 185 190
 Ala Ile Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ser Gly Lys Ala Leu Gly Val Ala Val
 210 215 220
 Ala Thr Gly Leu Gln Thr Glu Leu Gly Lys Ile Arg Ser Gln Met Ala
 225 230 235 240
 Ala Val Glu Pro Glu Arg Thr Pro Leu Gln Arg Lys Leu Asp Glu Phe
 245 250 255
 Gly Arg Gln Leu Ser His Ala Ile Ser Val Ile Cys Val Ala Val Trp
 260 265 270
 Val Ile Asn Ile Gly His Phe Ala Asp Pro Ala His Gly Gly Ser Trp
 275 280 285
 Leu Arg Gly Ala Val Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320
 Leu Gly Thr Arg Arg Met Ala Arg Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Val
 355 360 365
 Val Ala Glu Ala Glu Ala Gly Thr Cys Arg Leu His Glu Phe Thr Ile
 370 375 380
 Ser Gly Thr Thr Tyr Thr Pro Glu Gly Glu Val Arg Gln Gly Glu Gln
 385 390 395 400
 Pro Val Arg Cys Gly Gln Phe Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Asp Leu Lys Gly Leu Ser Arg
 450 455 460

Val Glu Arg Ala Gly Ala Cys Asn Ser Val Ile Lys Gln Leu Met Arg
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Thr Arg Ala Asp Pro Lys Val Gln Ser Ser Lys Met
 500 505 510

Phe Val Lys Gly Ala Pro Glu Ser Val Ile Glu Arg Cys Ser Ser Val
 515 520 525

Arg Val Gly Ser Arg Thr Ala Pro Leu Ser Thr Thr Ser Arg Glu His
 530 535 540

Ile Leu Ala Lys Ile Arg Asp Trp Gly Ser Gly Ser Asp Thr Leu Arg
 545 550 555 560

Cys Leu Ala Leu Ala Thr Arg Asp Thr Pro Pro Arg Lys Glu Asp Met
 565 570 575

His Leu Asp Asp Cys Ser Arg Phe Val Gln Tyr Glu Thr Asp Leu Thr
 580 585 590

Phe Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Pro Glu Val Ala
 595 600 605

Ala Cys Val Thr Arg Cys Ser Arg Ala Gly Ile Arg Val Val Met Ile
 610 615 620

Thr Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Leu Gly
 625 630 635 640

Ile Phe Gly Asp Thr Glu Asp Val Leu Gly Lys Ala Tyr Thr Gly Arg
 645 650 655

Glu Phe Asp Asp Leu Ser Pro Glu Gln Gln Arg Gln Ala Cys Arg Thr
 660 665 670

Ala Arg Cys Phe Ala Arg Val Glu Pro Ala His Lys Ser Arg Ile Val
 675 680 685

Glu Asn Leu Gln Ser Phe Asn Glu Ile Thr Ala Met Thr Gly Asp Gly
 690 695 700

Val Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met
 705 710 715 720

Gly Ser Gly Thr Ala Val Ala Lys Ser Ala Ala Glu Met Val Leu Ser
 725 730 735

Asp Asp Asn Phe Ala Ser Ile Val Ala Ala Val Glu Glu Gly Arg Ala
 740 745 750

Ile Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn
 755 760 765

Val Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ile Leu Gly Leu Pro
 770 775 780
 Glu Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp
 785 790 795 800
 Gly Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile
 805 810 815
 Met Glu Lys Pro Pro Arg Asn Pro Arg Glu Ala Leu Ile Ser Gly Trp
 820 825 830
 Leu Phe Phe Arg Tyr Leu Ala Ile Gly Val Tyr Val Gly Leu Ala Thr
 835 840 845
 Val Ala Ala Ala Thr Trp Trp Phe Ile Ala Asp Ala Glu Gly Pro Gln
 850 855 860
 Val Thr Phe Tyr Gln Leu Arg Asn Phe Leu Lys Cys Ser Glu Asp Asn
 865 870 875 880
 Pro Leu Phe Ala Gly Ile Asp Cys Lys Val Phe Glu Ser Arg Phe Pro
 885 890 895
 Thr Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala
 900 905 910
 Leu Asn Ser Val Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp
 915 920 925
 Leu Asn Pro Trp Leu Leu Gly Ala Val Val Met Ser Met Ala Leu His
 930 935 940
 Phe Leu Ile Leu Leu Val Pro Pro Leu Pro Leu Ile Phe Gln Val Thr
 945 950 955 960
 Pro Leu Ser Gly Arg Gln Trp Gly Val Val Leu Gln Met Ser Leu Pro
 965 970 975
 Val Ile Leu Met Asp Glu Ala Leu Lys Tyr Leu Ser Arg Asn His Met
 980 985 990
 Asp Glu Val Leu Gly Thr Phe Met Gln Ala Arg Ser Arg Gln Leu Pro
 995 1000 1005
 Thr Thr Ser Arg Thr Pro Tyr His Thr Gly Leu Ala Ser Trp Lys Lys
 1010 1015 1020
 Arg Thr
 1025

<210> 20
 <211> 998
 <212> PRT
 <213> Mus musculus

<400> 20
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Gln Pro Ala Ile Leu Glu
 995

<210> 21

<211> 1044

<212> PRT

<213> Mus musculus

<400> 21

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Ser Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Lys Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Asp Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Gln Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Ser Cys Ser
 995 1000 1005

Leu Ser Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile
 1010 1015 1020

Met Pro Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp
 1025 1030 1035 1040

Met Phe Trp Ser

<210> 22
 <211> 1043
 <212> PRT
 <213> Rattus norvegicus

<400> 22
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220
 Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240
 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255
 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270
 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Pro Gly Lys Glu Cys Ala Gln Pro Ala Thr Lys Pro Ser Cys Ser Leu
 995 1000 1005

Ser Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile Met
 1010 1015 1020

Pro Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Met
 1025 1030 1035 1040

Phe Trp Ser

<210> 23
 <211> 997
 <212> PRT
 <213> Rattus norvegicus

<400> 23
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val Gln Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Ala Ile Leu Glu
 995

<210> 24
 <211> 997
 <212> PRT
 <213> Canis familiaris

<400> 24

Met	Glu	Asn	Ala	His	Thr	Lys	Thr	Val	Glu	Glu	Val	Leu	Gly	His	Phe
1					5				10						15
Gly	Val	Asn	Glu	Ser	Thr	Gly	Leu	Ser	Leu	Glu	Gln	Val	Lys	Lys	Leu
					20				25						30
Lys	Glu	Arg	Trp	Gly	Ser	Asn	Glu	Leu	Pro	Ala	Glu	Glu	Gly	Lys	Thr
					35				40						45
Leu	Leu	Glu	Leu	Val	Ile	Glu	Gln	Phe	Glu	Asp	Leu	Leu	Val	Arg	Ile
					50				55						60
Leu	Leu	Leu	Ala	Ala	Cys	Ile	Ser	Phe	Val	Leu	Ala	Trp	Phe	Glu	Glu
					65				70						80
Gly	Glu	Glu	Thr	Ile	Thr	Ala	Phe	Val	Glu	Pro	Phe	Val	Ile	Leu	Leu
					85				90						95
Ile	Leu	Val	Ala	Asn	Ala	Ile	Val	Gly	Val	Trp	Gln	Glu	Arg	Asn	Ala
					100				105						110
Glu	Asn	Ala	Ile	Glu	Ala	Leu	Lys	Glu	Tyr	Glu	Pro	Glu	Met	Gly	Lys
					115				120						125
Val	Tyr	Arg	Gln	Asp	Arg	Lys	Ser	Val	Gln	Arg	Ile	Lys	Ala	Lys	Asp
					130				135						140
Ile	Val	Pro	Gly	Asp	Ile	Val	Glu	Ile	Ala	Val	Gly	Asp	Lys	Val	Pro
					145				150						160
Ala	Asp	Ile	Arg	Leu	Thr	Ser	Ile	Lys	Ser	Thr	Thr	Leu	Arg	Val	Asp
					165				170						175
Gln	Ser	Ile	Leu	Thr	Gly	Glu	Ser	Val	Ser	Val	Ile	Lys	His	Thr	Asp
					180				185						190
Pro	Val	Pro	Asp	Pro	Arg	Ala	Val	Asn	Gln	Asp	Lys	Lys	Asn	Met	Leu
					195				200						205
Phe	Ser	Gly	Thr	Asn	Ile	Ala	Ala	Gly	Lys	Ala	Met	Gly	Val	Val	Val
					210				215						220
Ala	Thr	Gly	Val	Asn	Thr	Glu	Ile	Gly	Lys	Ile	Arg	Asp	Glu	Met	Val
					225				230						240
Ala	Thr	Glu	Gln	Glu	Arg	Thr	Pro	Leu	Gln	Gln	Lys	Leu	Asp	Glu	Phe
					245				250						255
Gly	Glu	Gln	Leu	Ser	Lys	Val	Ile	Ser	Leu	Ile	Cys	Ile	Ala	Val	Trp
					260				265						270
Ile	Ile	Asn	Ile	Gly	His	Phe	Asn	Asp	Pro	Val	His	Gly	Gly	Ser	Trp
					275				280						285
Ile	Arg	Gly	Ala	Ile	Tyr	Tyr	Phe	Lys	Ile	Ala	Val	Ala	Leu	Ala	Val
					290				295						300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Arg Val Glu Gly Asp Ser Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Val
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met Asn
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Asp Asp Asn Pro
 865 870 875 880

Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu			
915	920	925	
Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe			
930	935	940	
Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro			
945	950	955	960
Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val			
965	970	975	
Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu			
980	985	990	
Pro Ala Ile Leu Glu			
995			

<210> 25

<211> 997

<212> PRT

<213> Felis catus

<400> 25

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly Tyr Phe			
1	5	10	15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu			
20	25	30	

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr			
35	40	45	

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile			
50	55	60	

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu			
65	70	75	80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu			
85	90	95	

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala			
100	105	110	

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys			
115	120	125	

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp			
130	135	140	

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro			
145	150	155	160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp			
165	170	175	

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Lys Lys Phe Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Val
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met Asn
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Ser Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Asp Asp Asn Pro
 865 870 875 880

 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

 Pro Ala Ile Leu Glu
 995

<210> 26
 <211> 997
 <212> PRT
 <213> Sus scrofa

<400> 26
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Léu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Met Arg Arg Glu Glu Met Asn
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Glu Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Thr Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Glu Gly Val Asp Cys Ala Val Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Ala Ile Leu Glu
 995

<210> 27
 <211> 1042
 <212> PRT
 <213> Sus scrofa

<400> 27
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240
 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255
 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270
 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285
 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300
 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320
 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335
 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350
 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365
 Leu Asp Lys Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380
 Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400
 Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Pro Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Met Arg Arg Glu Glu Met Asn
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Glu Ala Cys Leu Asn Ala
 660 665 670

Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685

Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Lys Ser Glu Ile Gly Ile Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Thr Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Val Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Leu Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Cys Ser Phe Ser
 995 1000 1005
 Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile Met Pro
 1010 1015 1020
 Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Met Phe
 1025 1030 1035 1040
 Trp Ser

<210> 28
 <211> 1042
 <212> PRT
 <213> Homo sapiens

<400> 28
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365
 Leu Asp Arg Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380
 Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400
 Pro Val Asn Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Ser Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Pro Gly Lys Glu Cys Val Gln Pro Ala Thr Lys Ser Cys Ser Phe Ser
 995 1000 1005

Ala Cys Thr Asp Gly Ile Ser Trp Pro Phe Val Leu Leu Ile Met Pro
 1010 1015 1020

Leu Val Val Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Met Phe
 1025 1030 1035 1040

Trp Ser

<210> 29

<211> 998

<212> PRT

<213> Homo sapiens

<400> 29

Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Arg Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

Pro Val Asn Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Ser Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Pro Val Leu Ser Ser Leu
 995

<210> 30
 <211> 997
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15

Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30

Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45

Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60

Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80

Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Arg Val Glu Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

Pro Val Asn Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Ser Gly Val Lys Gln Lys Ile
 530 535 540

Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560

Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575

Leu Glu Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590

Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605

Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620

Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640

Phe Gly Gln Asp Glu Asp Val Thr Ser Lys Ala Phe Thr Gly Arg Glu
 645 650 655

Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830
 Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Ala Ile Leu Glu
 995

<210> 31
 <211> 997
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 31
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95
 Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110
 Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125
 Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140
 Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160
 Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175
 Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190
 Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205
 Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

 Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

 Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

 Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

 Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

 Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

 Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

 Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

 Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

 Leu Asp Lys Val Asp Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

 Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

 Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415

 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430

 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445

 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460

 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480

 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495

 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510

 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525

Val Gly Ser Thr Lys Val Pro Met Thr Ala Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Lys Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Glu Glu Asp Val Thr Ala Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700
 Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ile Ala Met Gly
 705 710 715 720
 Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735
 Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750
 Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765
 Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780
 Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800
 Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815
 Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845
 Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860
 Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880
 Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895
 Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910
 Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925
 Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940
 Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960
 Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975
 Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990
 Pro Ala Ile Leu Glu
 995

<210> 32
 <211> 1042
 <212> PRT
 <213> Oryctolagus cuniculus

<400> 32
 Met Glu Asn Ala His Thr Lys Thr Val Glu Glu Val Leu Gly His Phe
 1 5 10 15
 Gly Val Asn Glu Ser Thr Gly Leu Ser Leu Glu Gln Val Lys Lys Leu
 20 25 30
 Lys Glu Arg Trp Gly Ser Asn Glu Leu Pro Ala Glu Glu Gly Lys Thr
 35 40 45
 Leu Leu Glu Leu Val Ile Glu Gln Phe Glu Asp Leu Leu Val Arg Ile
 50 55 60
 Leu Leu Leu Ala Ala Cys Ile Ser Phe Val Leu Ala Trp Phe Glu Glu
 65 70 75 80
 Gly Glu Glu Thr Ile Thr Ala Phe Val Glu Pro Phe Val Ile Leu Leu
 85 90 95

Ile Leu Val Ala Asn Ala Ile Val Gly Val Trp Gln Glu Arg Asn Ala
 100 105 110

Glu Asn Ala Ile Glu Ala Leu Lys Glu Tyr Glu Pro Glu Met Gly Lys
 115 120 125

Val Tyr Arg Gln Asp Arg Lys Ser Val Gln Arg Ile Lys Ala Lys Asp
 130 135 140

Ile Val Pro Gly Asp Ile Val Glu Ile Ala Val Gly Asp Lys Val Pro
 145 150 155 160

Ala Asp Ile Arg Leu Thr Ser Ile Lys Ser Thr Thr Leu Arg Val Asp
 165 170 175

Gln Ser Ile Leu Thr Gly Glu Ser Val Ser Val Ile Lys His Thr Asp
 180 185 190

Pro Val Pro Asp Pro Arg Ala Val Asn Gln Asp Lys Lys Asn Met Leu
 195 200 205

Phe Ser Gly Thr Asn Ile Ala Ala Gly Lys Ala Met Gly Val Val Val
 210 215 220

Ala Thr Gly Val Asn Thr Glu Ile Gly Lys Ile Arg Asp Glu Met Val
 225 230 235 240

Ala Thr Glu Gln Glu Arg Thr Pro Leu Gln Gln Lys Leu Asp Glu Phe
 245 250 255

Gly Glu Gln Leu Ser Lys Val Ile Ser Leu Ile Cys Ile Ala Val Trp
 260 265 270

Ile Ile Asn Ile Gly His Phe Asn Asp Pro Val His Gly Gly Ser Trp
 275 280 285

Ile Arg Gly Ala Ile Tyr Tyr Phe Lys Ile Ala Val Ala Leu Ala Val
 290 295 300

Ala Ala Ile Pro Glu Gly Leu Pro Ala Val Ile Thr Thr Cys Leu Ala
 305 310 315 320

Leu Gly Thr Arg Arg Met Ala Lys Lys Asn Ala Ile Val Arg Ser Leu
 325 330 335

Pro Ser Val Glu Thr Leu Gly Cys Thr Ser Val Ile Cys Ser Asp Lys
 340 345 350

Thr Gly Thr Leu Thr Thr Asn Gln Met Ser Val Cys Arg Met Phe Ile
 355 360 365

Leu Asp Lys Val Asp Gly Asp Thr Cys Ser Leu Asn Glu Phe Thr Ile
 370 375 380

Thr Gly Ser Thr Tyr Ala Pro Ile Gly Glu Val His Lys Asp Asp Lys
 385 390 395 400

Pro Val Lys Cys His Gln Tyr Asp Gly Leu Val Glu Leu Ala Thr Ile
 405 410 415
 Cys Ala Leu Cys Asn Asp Ser Ala Leu Asp Tyr Asn Glu Ala Lys Gly
 420 425 430
 Val Tyr Glu Lys Val Gly Glu Ala Thr Glu Thr Ala Leu Thr Cys Leu
 435 440 445
 Val Glu Lys Met Asn Val Phe Asp Thr Glu Leu Lys Gly Leu Ser Lys
 450 455 460
 Ile Glu Arg Ala Asn Ala Cys Asn Ser Val Ile Lys Gln Leu Met Lys
 465 470 475 480
 Lys Glu Phe Thr Leu Glu Phe Ser Arg Asp Arg Lys Ser Met Ser Val
 485 490 495
 Tyr Cys Thr Pro Asn Lys Pro Ser Arg Thr Ser Met Ser Lys Met Phe
 500 505 510
 Val Lys Gly Ala Pro Glu Gly Val Ile Asp Arg Cys Thr His Ile Arg
 515 520 525
 Val Gly Ser Thr Lys Val Pro Met Thr Ala Gly Val Lys Gln Lys Ile
 530 535 540
 Met Ser Val Ile Arg Glu Trp Gly Ser Gly Ser Asp Thr Leu Arg Cys
 545 550 555 560
 Leu Ala Leu Ala Thr His Asp Asn Pro Leu Arg Arg Glu Glu Met His
 565 570 575
 Leu Lys Asp Ser Ala Asn Phe Ile Lys Tyr Glu Thr Asn Leu Thr Phe
 580 585 590
 Val Gly Cys Val Gly Met Leu Asp Pro Pro Arg Ile Glu Val Ala Ser
 595 600 605
 Ser Val Lys Leu Cys Arg Gln Ala Gly Ile Arg Val Ile Met Ile Thr
 610 615 620
 Gly Asp Asn Lys Gly Thr Ala Val Ala Ile Cys Arg Arg Ile Gly Ile
 625 630 635 640
 Phe Gly Gln Glu Glu Asp Val Thr Ala Lys Ala Phe Thr Gly Arg Glu
 645 650 655
 Phe Asp Glu Leu Asn Pro Ser Ala Gln Arg Asp Ala Cys Leu Asn Ala
 660 665 670
 Arg Cys Phe Ala Arg Val Glu Pro Ser His Lys Ser Lys Ile Val Glu
 675 680 685
 Phe Leu Gln Ser Phe Asp Glu Ile Thr Ala Met Thr Gly Asp Gly Val
 690 695 700

Asn Asp Ala Pro Ala Leu Lys Lys Ala Glu Ile Gly Ilé Ala Met Gly
 705 710 715 720

Ser Gly Thr Ala Val Ala Lys Thr Ala Ser Glu Met Val Leu Ala Asp
 725 730 735

Asp Asn Phe Ser Thr Ile Val Ala Ala Val Glu Glu Gly Arg Ala Ile
 740 745 750

Tyr Asn Asn Met Lys Gln Phe Ile Arg Tyr Leu Ile Ser Ser Asn Val
 755 760 765

Gly Glu Val Val Cys Ile Phe Leu Thr Ala Ala Leu Gly Phe Pro Glu
 770 775 780

Ala Leu Ile Pro Val Gln Leu Leu Trp Val Asn Leu Val Thr Asp Gly
 785 790 795 800

Leu Pro Ala Thr Ala Leu Gly Phe Asn Pro Pro Asp Leu Asp Ile Met
 805 810 815

Asn Lys Pro Pro Arg Asn Pro Lys Glu Pro Leu Ile Ser Gly Trp Leu
 820 825 830

Phe Phe Arg Tyr Leu Ala Ile Gly Cys Tyr Val Gly Ala Ala Thr Val
 835 840 845

Gly Ala Ala Ala Trp Trp Phe Ile Ala Ala Asp Gly Gly Pro Arg Val
 850 855 860

Ser Phe Tyr Gln Leu Ser His Phe Leu Gln Cys Lys Glu Asp Asn Pro
 865 870 875 880

Asp Phe Glu Gly Val Asp Cys Ala Ile Phe Glu Ser Pro Tyr Pro Met
 885 890 895

Thr Met Ala Leu Ser Val Leu Val Thr Ile Glu Met Cys Asn Ala Leu
 900 905 910

Asn Ser Leu Ser Glu Asn Gln Ser Leu Leu Arg Met Pro Pro Trp Glu
 915 920 925

Asn Ile Trp Leu Val Gly Ser Ile Cys Leu Ser Met Ser Leu His Phe
 930 935 940

Leu Ile Leu Tyr Val Glu Pro Leu Pro Leu Ile Phe Gln Ile Thr Pro
 945 950 955 960

Leu Asn Val Thr Gln Trp Leu Met Val Leu Lys Ile Ser Leu Pro Val
 965 970 975

Ile Leu Met Asp Glu Thr Leu Lys Phe Val Ala Arg Asn Tyr Leu Glu
 980 985 990

Pro Gly Lys Glu Cys Val Gln Pro Ala Pro Gln Ser Cys Ser Leu Trp
 995 1000 1005



Ala Cys Thr Glu Gly Val Ser Trp Pro Phe Val Leu Leu Ile Val Pro
1010 . 1015 1020

Leu Val Met Trp Val Tyr Ser Thr Asp Thr Asn Phe Ser Asp Leu Leu
1025 1030 1035 1040

Trp Ser